

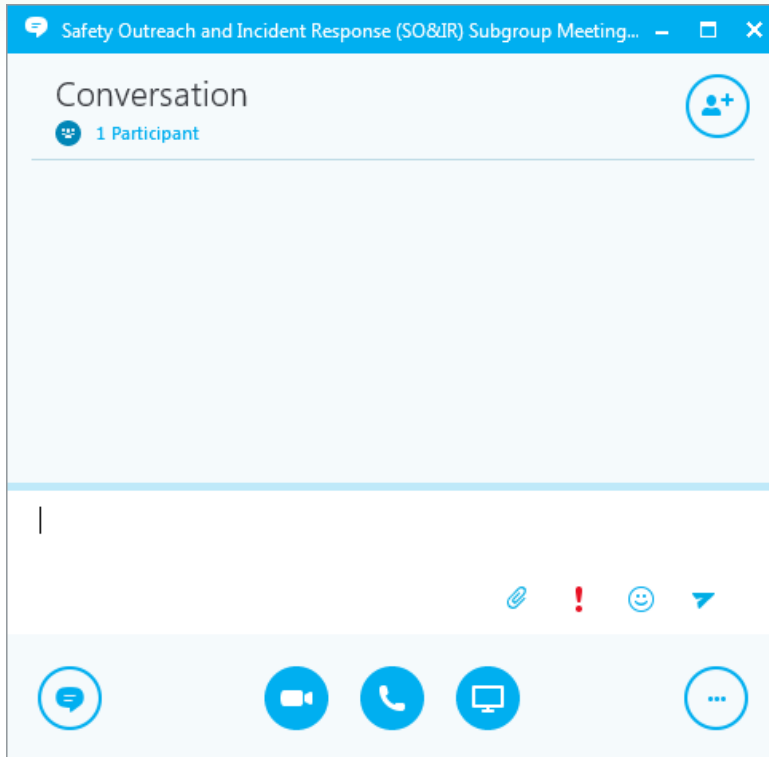
# **Energy Storage Safety Outreach and Incident Response Working Group Meeting**

March 1<sup>st</sup>, 2016

*Hosted by*

David Rosewater  
Sandia National Laboratories  
On Behalf of the ESSWG

# Skype Housekeeping



- All participant lines are not-muted. Please mute your own line , except when talking, so that background noise does not disrupt conversation.
- Do not place the line “on hold” as this will cause music to play
- If you have a question or need assistance during the meeting, **please speak up**

**This webinar is being recorded for note taking purposes.**

# Energy Storage Safety Working Group (ESSWG) Webinar Agenda



02:30 pm – 02:35 pm	Welcome and Skype Housekeeping
02:35 pm – 02:40 pm	Welcome and Introductory Comments - Agenda Overview
02:40 pm – 02:45 pm	Overview of ESSWG
02:45 pm – 02:55 pm	Introductions
02:55 pm – 03:05 pm	Action items from last meeting
03:05 pm – 03:20 pm	Discussions on safety information sheet
03:20 pm – 03:25 pm	Outreach opportunities
03:25 pm – 03:30 pm	Closing remarks and Next Meeting Info

# Energy Storage Safety Outreach and Incident Response Working Group Scope of Work



- Supported by DOE Office of Electricity Energy Storage Program
- DOE OE Energy Storage Safety Plan developed by ESS WG and focused on safety associated with all stationary ESS
- Projects to address gaps, needs and opportunities in three areas:
  - Safety Validation and Risk Assessment (Ferreira SNL)
  - Codes and Standards (Conover PNNL)
  - **Safety Outreach and Incident Response (Rosewater SNL)**

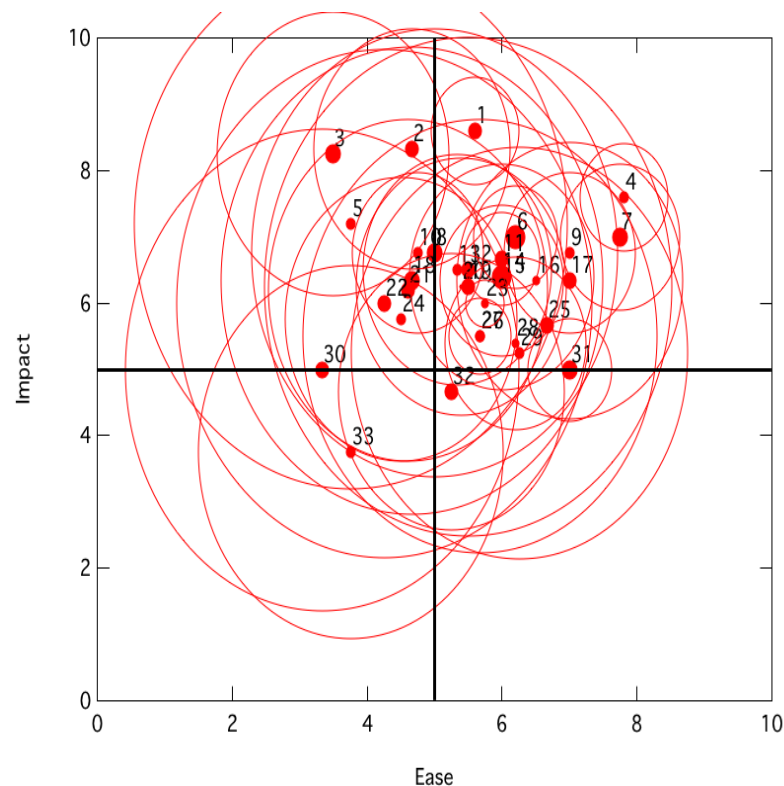
# Energy Storage Safety Outreach and Education Working Group (cont'd)



## Top Issues in Safety Outreach and Incident Response

- A. Provide guidance and information on ESS installation and protection design
- B. Provide guidance and information operational safety including thermal management
- C. Develop first responder training material for responding to an ESS fire
- D. Develop guidance and information on ESS safety analysis through energy storage websites, the ESS Handbook, and by offering safety analysis courses to developers and startups
- E. Promote first responder knowledge and confidence by developing a template for providing information to and working with local fire departments and by make safe methods available to first responder groups through demonstration (practice system fire), videos, guides, and courses.
- F. Provide links to educational material on cyber security on energy storage websites
- G. Provide guidance and information on the safe transportation/delivery of energy storage systems

Safety Outreach and Incident Response Quad Chart



# Introductions

Please state your name and organization

# Action Items from last meeting



## **Actions Identified for the Safety Outreach and Incident Response working group**

- Review draft information Packet
- Identify Upcoming Outreach Opportunities

## **Identify new Actions to Consider**

# Review of safety information sheet



## Outline

1. Introduction
2. Energy storage types and maturity
3. Safety codes and standards
4. Research and development
5. Emergency Preparedness
6. Conclusion

## Fire Service Version

Emphasizes first responder considerations, community risk assessment, hazard analysis

## Code Officials Version

Emphasizes customer side of the meter, non-“grid-scale,” building and installation codes



# Upcoming Outreach Opportunities



- Colorado Chapter of the International Code Council (March 3<sup>rd</sup> Denver CO)
- Battery Safety Council (Washington April 5-6) (First Responders, Aviation, Vehicle, Military)
  - Firefighting Technologies [barnesjim@aol.com](mailto:barnesjim@aol.com)
- Southwest PUC Energy Storage Workshop (May in Albuquerque) (Regulators)
- International Association of Electrical Inspectors IAEI meeting Phoenix AZ August 24<sup>th</sup>

Subgroup to find Outreach Opportunities

# Identify new Actions to Consider



- **Work with the ESIC to develop templates for:**
  - Site specific risk assessment (FMEA/SSA)
  - Site specific emergency action plan
  - Incident training manual

Subgroup to find Outreach Opportunities

# Closing Remarks

**David Rosewater, PE**

Energy Storage Technology & Systems

Sandia National Laboratories

[dmrose@sandia.gov](mailto:dmrose@sandia.gov)

(505) 844-3722